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Evidence based validation of *Dendrobium fimbriatum* as a hepatoprotectant: An orchid from Northeast India

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Dendrobium fimbriatum Hooker., is an important orchid found in Northeast India. It is used by the locals as traditional medicine in resetting of fractured bones and possesses antioxidant activity. It has been reported to possess constituents like rhein, fimbriatone, etc. However, there is a dearth of scientific data on its phytochemical and pharmacological evaluation. Thus, on the basis of published reports, the present study was aimed to evaluate the hepatoprotective activity of hydroalcoholic extract of *Dendrobium fimbriatum* stem in CCl₄ intoxicated albino Wistar rats. The quality of the plant material was assessed and individual plant parts were evaluated for the presence of active markers; ursolic acid, β -sitosterol and lupeol using a validated HPTLC and HPLC method. Safety of the plant extract was established in albino Swiss mice following the OECD guidelines no. 420 and it was found to be safe up to an oral dose of 2000 mg/kg body weight. Hepatoprotective activity of the extract of *Dendrobium fimbriatum* stem was studied at three doses in terms of various biochemical parameters and histopathology. The results were compared with a known herbal drug, Silymarin. Oral administration of the extract of *Dendrobium fimbriatum* stem showed hepatoprotective activity in a dose-dependent manner and the results were at par with the positive control Silymarin. The results of histopathological observation were also found to be in compliance with the findings of biochemical parameters analysis suggesting the possible use of *Dendrobium fimbriatum* as hepatoprotective agent and forms baseline for future pharmacological investigations.

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